7-14-03

FORM PTO-1449 (REV. 7-85) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE CITATION

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ATTY. DOCKET NO. 4-31617A
APPLICATION NO. TBA
APPLICANT Liau, et al.
FILING DATE June 24, 2003
Group

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
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	AM	WO 01/31029	5/3/01	WIPO			☐	☐
	AN	WO 01/60990	8/23/01	WIPO			☐	☐
	AO	WO 99/12533	3/18/99	WIPO			☐	☐
	AP	WO 99/61581	12/2/99	WIPO			☐	☐
	AQ	WO 00/70028	11/23/00	WIPO			☐	☐

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

	AR	Ancellin, et al., "Differential Pharmacological Properties and Signal Transduction of the Sphingosine 1-Phosphate Receptors EDG-1, EDG-3, and EDG-5;" *The Journal of Biological Chemistry*, 274(27):18997-19002 (July 2, 1999)
	AS	Ancellin, et al., "Extracellular Export of Sphingosine Kinase-1 Enzyme;" *The Journal of Biological Chemistry*, 277(8):6667-6675 (December 10, 2001)
	AT	Banno, et al., "Evidence for the Presence of Multiple Forms of Sph Kinase in Human Platelets," *J. Biochem.*, 335:301-304 (1998)

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	AR	Boguslawski, et al., "Sphingosylphosphorylcholine Induces Endothelial Cell Migration and Morphogenesis," *Biochemical and Biophysical Research Communications*, 272:603-609 (June 7, 2000)
	AS	Bornfeldt, et al., "Sphingosine-1-Phosphate Inhibits PDGF-induced Chemotaxis of Human Arterial Smooth Muscle Cells: Spatial and Temporal Modulation of PDGF Chemotactic Signal Transduction;" *The Journal of Cell Biology*, 130(1):193-206 (1995)
	AT	Edsall, et al., "Enzymatic Measurement of Sphingosine 1-Phosphate;" *Analytical Biochemistry*, 272:80-86 (July 15, 1999)

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	AA	English, et al., "Sphingosine 1-Phosphate Released from Platelets During Clotting Accounts for the Potent Endothelial Cell Chemotactic Activity of Blood Serum and Provides a Novel Link Between Hemostasis and Angiogenesis;" *The FASEB Journal*, 14:2255-2265 (November 2000)
	AB	Enming, et al., "An Adenoviral Vector Expressing Sphingosine Kinase 1 Confers Enhanced Neovascularization;" *Scientific Conference on Therapeutic Angiogenesis and Myocardial Laser Revascularization*, January 24-27, 2001, Santa Fe, New Mexico, Abstract P58
	AC	Fang, et al., "Lysophospholipid Growth Factors in the Initiation, Progression, Metastases, and Management of Ovarian Cancer;" *Ann NY Acad Sci 2000*, 905:188-208 (April 2000)
	AD	Gibbs, et al., "Regulation of Expression of EDG Family Receptors in Human Prosate Cancer Cell Lines;" *Ann NY Acad Sci 2000*, 905:290-293 (April 2000)
	AE	Goetzl, et al., "Diversity of Cellular Receptors and Functions for the Lysophospholipid Growth Factors Lysophosphatidic Acid and Sphingosine 1-Phosphate;" *The FASEB Journal*, 12:1589-1598 (December 1998)
	AF	Hisano, et al., "Induction and Suppression of Endothelial Cell Apoptosis by Sphingolipids: A Possible In Vitro Model for Cell-Cell Interactions Between Platelets and Endothelial Cells;" *Blood*, 93(12):4293-4299 (June 15, 1999)
	AG	Hla, et al., "An Abundant Transcript Induced in Differentiating Human Endothelial Cells Encodes a Polypeptide with Structural Similarities to G-protein-coupled Receptors;" *The Journal of Biological Chemistry*, 265(16):9308-9313 (June 5, 1990)
	AH	Hla, et al., "Sphingosine-1-phosphate: Extracellular Mediator or Intracellular Second Messenger?" *Biochemical Pharmacology*, 58:201-207 (July 15, 1999)
	AI	International Search Report for PCT/EP01/11513, dated April 25, 2002
	AJ	Kohama, et al., "Molecular Cloning and Functional Characterization of Murine Sphingosine Kinase;" *The Journal of Biological Chemistry*, 273(37):23722-23728 (September 11, 1998)
	AK	Lee, et al., "Lysophosphatidic Acid Stimulates the G-protein-coupled Receptor EDG-1 as a Low Affinity Agonist;" *The Journal of Biological Chemistry*, 273(34):22105-22112 (August 21, 1998)
	AL	Lee, et al., "Sphingosine-1-Phosphate as a Ligand for the G Protein-coupled Receptor EDG-1;" *Science*, 279:1552-1555 (March 6, 1998)
	AM	Lee, et al., "The Inducible G Protein-coupled Receptor edg-1 Signals via the Gi/Mitogen-activated Protein Kinase Pathway;" *The Journal of Biological Chemistry*, 271(19):11272-11279 (May 10, 1996)
	AN	Lee, et al., "Vascular Endothelial Cell Adherens Junction Assembly and Morphogenesis Induced by Sphingosine-1-Phosphate;" *Cell*, 99:301-312 (October 29, 1999)

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	AA	Lee, et al., "Sphingosine 1-Phosphate Induces Angiogenesis: Its Angiogenic Action and Signaling Mechanism in Human Umbilical Vein Endothelial Cells;" *Biochemical and Biophysical Research Communications*, 264:743-750 (November 1999)
	AB	Liau, G., "Angiogenesis - Potential Therapeutic Utility;" oral presentation presented October 6, 2000, at the *IBC's Sixth Annual International Conference on Angiogenesis*, October 5-6, 2000
	AC	Liau, et al., "An Adenoviral Vector Expressing Sphingosine Kinase 1 Confers Enhanced Neovascularization;" abstract published June 26, 2001, *6th Biannual International Meeting, Angiogenesis: Basic Science and Clinical Developments*, June 26 - July 2, 2001, Crete, Greece
	AD	Liau, G., "Pro-angiogenesis Gene Therapy;" oral presentation presented June 29, 2001 at the *6th International Meeting Angiogenesis: Basic Science and Clinical Development*, June 29, 2001
	AE	Liau, et al., "An Adenoviral Vector Expressing Sphingosine Kinase 1 Confers Enhanced Neovascularization;" poster presented at the *6th Biannual International Meeting, Angiogenesis: Basic Science and Clinical Developments*, June 26 - July 2, 2001, Crete, Greece
	AF	Liu, et al., "Ligand-induced Trafficking of the Sphingosine-1-phosphate Receptor EDG-1;" *Molecular Biology of the Cell*, 10:1179-1190 (April 1999)
	AG	Liu, et al., "The Mouse Gene for the Inducible G-Protein-Coupled Receptor edg-1;" *Genomics*, 43:15-24 (1997)
	AH	Liu, et al., "Molecular Cloning and Functional Characterization of a Novel Mammalian Sphingosine Kinase Type 2 Isoform;" *The Journal of Biological Chemistry*, 275(26):19513-19520, published April 5, 2000
	AI	Liu, Y., "Edg-1, the G Protein-coupled Receptor for Sphingosine-1-Phosphate, is Essential for Vascular Maturation;" *The Journal of Clinical Investigation*, 106(8):951-961 (October 2000)
	AJ	Mandala, et al., "Molecular Cloning and Characterization of a Lipid Phosphohydrolase that Degrades Sphingosine-1-Phosphate and Induces Cell Death;" *PNAS*, 97(14):7859-7864 (July 5, 2000)
	AK	Nava, et al., "Functional Characterization of Human Sphingosine Kinase-1;" *FEBS Letters*, 473:81-84 (May 2000)
	AL	Offermanns, et al., "Vascular System Defects and Impaired Cell Chemokinesis as a Result of $G\alpha_{13}$ Deficiency;" *Science*, 275:533-536 (January 24, 1997)
	AM	Olivera, et al, "Purification and Characterization of Rat Kidney Sphingosine Kinase;" *The Journal of Biological Chemistry*, 273(20):12576-12583 (May 15, 1998)
	AN	Olivera, et al., "Sphingosine-1-Phosphate as Second Messenger in Cell Proliferation Induced by PDGF and FCS Mitogens;" *Nature*, 365:557-560 (October 7, 1993)

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	AA	Panetti, et al., "Sphingosine-1-Phosphate and Lysophosphatidic Acid Stimulate Endothelial Cell Migration;" *Arterioscler Thromb Vasc Biol.*, 20:1013-1019 (April 2000)
	AB	Passaniti, et al., "Methods in Laboratory Investigation;" *Laboratory Investigation*, 67(4):519-528 (1992)
	AC	Pitson, et al., "Expression of a Catalytically Inactive Sphingosine Kinase Mutant Blocks Agonist-induced Sphingosine Kinase Activation: A dominant-negative Sphingosine Kinase;" *The Journal of Biological Chemistry*, 275(43):33945-33950, published on August 15, 2000
	AD	Pyne, et al., "Sphingosine 1-Phosphate Signalling in Mammalian Cells;" *J. Biochem.*, 349:385-402 (July 2000)
	AE	Sato, T., "A New Role of Lipid Receptors in Vascular and Cardiac Morphogenesis;" *The Journal of Clinical Investigation*, 106(8):939-940 (October 2000)
	AF	Spiegel, S., "Sphingosine 1-Phosphate: A Prototype of a New Class of Second Messengers;" *Journal of Leukocyte Biology*, 65:341-344 (March 1999)
	AG	Wang, et al., "Sphingosine 1-Phosphate Stimulates Cell Migration through a Gi-coupled Cell Surface Receptor;" *The Journal of Biological Chemistry*, 274(50):35343-35350 (December 10, 1999)
	AH	Xia, et al., "Activation of Sphingosine Kinase by Tumor Necrosis Factor-□ Inhibits Apoptosis in Human Endothelial Cells;" *The Journal of Biological Chemistry*, 274(48):34499-34505 (November 26, 1999)
	AI	Yang, et al., "Sphingosine 1-Phosphate Formation and Intracellular Ca2+ Mobilization in Human Platelets: Evaluation With Sphingosine Kinase Inhibitors;" *J. Biochem.*, 126:84-89 (July 1999)
	AJ	Ylä-Herttuala, et al., "Cardiovascular Gene Therapy;" *The Lancet*, 355:213-222 (January 15, 2000)
	AK	Zhang, et al., "Comparative Analysis of Three Murine G-protein Coupled Receptors Activated by Sphingosine-1-Phosphate;" *Gene*, 227:89-99 (February 1999)
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ATTY. DOCKET NO. 4-31617B
APPLICATION NO. 10/619,344
APPLICANT LIAU ET AL.
FILING DATE JULY 14, 2003
Group 1635

U.S. PATENT DOCUMENTS

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	AA	5932540	8/1/99	Hu et al			
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	AS	Hla, et al., "Sphingosine-1-phosphate: Extracellular Mediator or Intracellular Second Messenger?" Biochemical Pharmacology, 58:201-207 (1999).
	AT	Kohama, et al., "Molecular Cloning and Functional Characterization of Murine Sphingosine Kinase," The Journal of Biological Chemistry, 273(37):23722-23728 (Sep. 11, 1998).

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	DB	Lee, et al., "Vascular Endothelial Cell Adherens Junction Assembly and Morphogenesis Induced by Sphingosine-1-Phosphate," Cell, 99:301-312 (Oct. 29, 1999).
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	DD	Liau, G., "A Gene Therapy Approach toward the Modulation of Angiogenesis," International Business Communications Sixth Annual International Conference on Angiogenesis, Oct. 5-6, 2000.
	DE	Liu, et al., "Molecular Cloning and Functional Characterization of a Novel Mammalian Sphingosine Kinase Type 2 Isoform," The Journal of Biological Chemistry, 275(26):19513-19520 (Jun. 30, 2000).
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	DG	Nava, et al., "Functional Characterization of Human Sphingosine Kinase-1," FEBS Letters, 473:81-84 (May 4, 2000).
	DH	Olivera, et al., "Sphingosine-1-Phosphate as Second Messenger in Cell Proliferation Induced by PDGF and FCS Mitogens," Nature, 365:557-560 (Oct. 7, 1993).
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	DJ	Passaniti, et al., "Methods in Laboratory Investigation," Laboratory Investigation, 67(4):519-528 (1992).
	DK	Pyne, et al., "Sphingosine 1-Phosphate Signalling in Mammalian Cells," Biochem., J., 349:385-402 (Jul. 15, 2000).
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